

REMARKS

This Amendment, submitted in response to the Office Action dated May 25, 2007, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-12 are all the claims pending in the application.

I. Rejection of Claims 5 and 11 under 35 U.S.C. § 112, first paragraph

The Examiner asserts that claims 5 and 11 contain subject matter which is not described in the specification in such a way as to reasonably convey to one skill in the art that the inventors, at the time the application was filed, has possession of the claimed invention.

Claim 5 recites “wherein said scaling factors for said train of pulses guaranty that an average power of the clipped signal is higher than said predefined threshold value.” Claim 11 recites “wherein said scaling factors for said train of pulses guaranty that an average power of the clipped signal is higher than said predefined threshold value.”

As discussed on page 12, last full paragraph of the Applicant’s specification:

“Contrary to usual known clipping methods consisting in saturating the peaks at the threshold value, the method according to the invention consists in applying scaling factors to the peaks which have an amplitude above a predefined threshold T_{CLIP} which takes as exactly as possible into account the influence of other peaks located in the convolution range of the peak not to generate overclipping effects.”

Therefore, contrary to the Examiner’s assertion, Applicant submits that the subject matter of claims 5 and 11 are supported in the specification as originally filed. Consequently, Applicant

requests that the rejection of claims 5 and 11 under 35 U.S.C. § 112, first paragraph be withdrawn.

Further, Applicant notes that claims 5 and 11 have not been rejected in view of prior art. Consequently, since Applicant has addressed the 35 U.S.C. § 112, first paragraph rejection, claims 5 and 11 should be deemed allowable.

II. Rejection of Claims 1-4 and 6-9 under 35 U.S.C. § 102(a)

Claims 1-4 and 6-9 have been rejected under 35 U.S.C. § 102(a) as being anticipated by Tellado et al. (USP 6,314,146; hereinafter “Tellado”).

Claim 1

Claim 1 recites “calculating scaling factors for a pulse train comprising a group of at least two peaks whose power exceeds a predefined threshold, said scaling factor for one peak taking into account an influence on said peak which occurs if at least one other peak of said group is applied a scaling factor; and applying said calculated scaling factors to said respective peaks of said group.”

The Examiner asserts that as discussed in col. 9, lines 15-35, a domain signal $x(t)$ has several peaks 130-133. The peaks 130-133 can be reduced by adding or subtracting a scaled impulse function. Impulse functions $p(t)$ are generating from different values of p . Figs. 10a-10b of Tellado disclose several impulse functions. The linear combinations of P correspond to the scaled and shifted versions of the kernel, p , such that the scaled and shifted versions of p negate the peaks of x .

Further, Tellado discloses “[f]or example, if $p(t)$ of FIG. 10c were to be applied to $x(t)$ of FIG. 8, $p(t)$ would be inverted and shifted to $t-2$ in order to cancel out the first peak 130. Also, if the first peak 130 exceeded the maximum value by some factor α , $p(t-2)$ would be scaled by a value greater than α , such as (1.2α) . When $x(t)$ and $(1.2 \alpha)p(t-2)$ are added the value at $t=2$ would be the maximum value + $\alpha - 1.2 \alpha$, which gives us a value less than the maximum value (maximum value - 0.2α). The scaling and time shifting of p merely scales and phase shifts the values of P , and therefore C . C , which is a linear combination of P , will have zero values at the non-peak reduction frequencies.”

However, there is no teaching or suggestion that a scaling factor is calculated for a pulse train. Specifically, there is no teaching or suggestion that a scaling factor for one peak takes into account an influence which occurs on the peak if another peak of the group of peaks is applied a scaling factor, as claimed. Moreover, there is no teaching or suggestion that calculated scaling factors are applied to the respective peaks of the group of peaks, as claimed.

Further, the Applicant’s invention uses the in-phase and quadrature components of the time signal to calculate the scaling factors. On the other hand, Tellado uses the frequency representation of the signal to approximate a scaling impulse function. See Tellado col. 9, line 15 to col. 10, line 61. Figures 10a and 10b of Tellado are approximations of the scaling impulse function resulting from using a finite frequency representation of the signal. Also, Tellado uses iterations to further approximate the impulse function. See Fig. 10b.

In addition, the peaks of Tellado are peaks in the scaling impulse function resulting from the approximation of the impulse function from a finite representation of the signal. See Tellado, col. 9, lines 21-25. The further iterations are used to reduce those unwanted peaks in the scaling impulse function. The peaks of the Applicant's invention are peaks in the (sampled) time signal, which are to be clipped. Such peaks are not treated in Tellado.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable. To the extent claim 8 recites similar subject matter, claim 8 and its dependent claims should be deemed allowable for at least the same reasons.

Claim 2

Claim 2 recites "wherein said influence depends on the distance between said peak and said at least one other peak." The Examiner asserts that the distance would influence the scaling and time shifting of p, which could cause the resulting waveform to exceed the maximum value at other positions. However, the Examiner's assertion appears to merely be based on the Examiner's personal reasoning. There is no teaching or suggestion that an influence, on the peak which occurs if at least one other peak of said group is applied a scaling factor, depends on a distance between a peak and another peak, as claimed. Specifically, there is no teaching or suggestion that the distance between peaks is taken into account. Consequently, claim 2 should be deemed allowable.

III. Rejection of Claim 10 under 35 U.S.C. § 103(a)

Claim 10 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tellado in view of Ma et al (USP 6,654,427; hereinafter "Ma"). Claim 10 should be deemed allowable

by virtue of its dependency to claim 8 for at least the reasons set forth above. Moreover, Ma does not cure the deficiencies of Tellado.

IV. New Claims

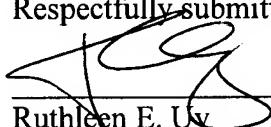
Applicant has added claim 12 to provide a more varied scope of protection. Suport for claim 12 can be found at, for example, page 12, lines 7 to 23 of the Applicant's specification. Claim 12 should be deemed allowable by virtue of its dependency to claim 1 for at least the reasons set forth above. Moreover, the art cited by the Examiner does not teach the elements of claim 12.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Ruthleen E. Uy
Registration No. 51,361

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

Date: August 27, 2007